DOCUMENT RESUME

ED 434 602 HE 032 380

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TITLE Teaching the Same Course via Distance and Traditional Education: A Case Study.
PUB DATE 1999-08-17
NOTE 26p.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Case Studies; Classroom Communication; Computer Mediated Communication; *Distance Education; Higher Education; Instructional Effectiveness; Instructional Innovation; *Internet; Nontraditional Education; Teacher Competencies; Teacher Student Relationship; Teaching Methods; Teaching Styles; *Technology; Technology Transfer; *Telecommunications

ABSTRACT

This case study was designed to investigate the effect on an instructor's simultaneously teaching the same course in both a distance and a traditional educational format. The study involved one male instructor-participant at a mid-sized regional university who, in one term, taught the same course in both distance and traditional format. Data were collected by observation and interviews, with the instructor allowing access to both classrooms for a 16-week term. The study found that while the instructor prepared similar materials for both distance and traditional classes, preparation for the distance education format was more time-consuming because of the need to fax materials to remote sites and to put supplemental material on the Internet. While a similar inquiry-based instructional method was used in both distance and traditional formats, in the distance format the instructor was a "talking head," with little participation and discussion from students. Other difficulties arising in the distance education format included the following: there was a need for more educational technology (e.g., faxes, Internet); in-class time-management was more complex; monitoring students at multiple local and remote sites was more complicated; and e-mail communication became so time-consuming that only distance education students were permitted to submit assignments via e-mail. (Contains 34 references.) (CH).

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Teaching the Same Course via Distance and Traditional Education: A Case Study

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Abstract

This exploratory case study is designed to investigate how educational technology affects the instructor's simultaneously teaching the same course via both distance and traditional education formats. This study involved a variety of equipment and qualitative methods to collect observation and interview data. This study has suggested that the instructor who teaches the same course in both distance education and traditional formats exhibits both similarities and differences among the three instructional phases in both situations. Recommendations for the university and the instructors of distance education result from this study.

Teaching the Same Course via Distance and Traditional Education: A Case Study

Distance educational technology has emerged rapidly in the past two decades while challenging and reshaping the traditional face-to-face instruction. A growing body of research in this area has consistently indicated that distance educational technology has great effects on instruction and administration (e. g., Berge, 1995; Cheng, Lehman, & Armstrong, 1991; Davie & Wells, 1991; McIssac et al., 1989). According to McIssac et al., the five research categories studied most frequently in the area of distance education fall under the two broad headings of instruction (learning, attitudes, and drop-outs) and administration (cost-effectiveness and courseware design). In addition, according to Burge et al. (1990), there are three major international methodological approaches to distance education: naturalistic, experimental, and survey.

In the area of distance education, there are many quantitative studies about how to empower the learners using distance education technology (e. g., Berge, 1995; Davie & Wells, 1991). Although qualitative research was advocated in this area over 10 years ago (e. g., Coldeway, 1988; Morgan, 1984; Rothe, 1985), there have not been many qualitative studies, especially case studies in this area since then (e. g., Burge, 1990; Morgan, 1990, 1991a, 1991b; Mottet, 1998; Powers & Mitchell, 1997; Wolcott, 1991). Due to the complexity of distance education, many researchers have proposed employing both quantitative and

qualitative approaches in this area (e. g., Kember, Lai, Murphy, Siaw, & Yuen, 1992; Rothe, 1985). Therefore, qualitative approach is necessary to gather and understand the multiple dimensions of distance education (Burge, 1990), as well as to build relevant theories in this area (Morgan, 1991a).

In order to meet all types of students' needs, some universities are now simultaneously offering the same course via both distance education and traditional formats. According to Olcott (1996), faculty is an important consideration for future successful distance education programs. However, there is little empirical research about an instructor simultaneously teaching the same course in both distance education and traditional formats. This study follows the naturalistic case study approach to investigate how educational technology affects the instructor. Specifically, this exploratory case study investigates the instructor who simultaneously teaches the same course in both distance education and traditional formats. The major research questions of this study are:

(1) How does educational technology affect the instructor in both distance education and traditional formats?

(2) What are the similarities and the differences among the instructional phases of simultaneously teaching the same course in both distance education and traditional formats?

Theoretical Framework

As described in the next research methodology section, this study involves non-participant observations in qualitative research. According to Wolcott (1992), one of the major theoretical foundations for non-participant observations in education is Eisner's (1985) theory of connoisseurship/criticism. This is the first theoretical framework for this study. According to Eisner, "To be a connoisseur is to know how to look, to see, and to appreciate" (p. 219). Therefore, connoisseurship refers to the act of knowledgeable perception or the art of appreciation.

According to Eisner (1985), connoisseurship is a private act, which includes recognizing and appreciating the qualities of a particular. This appreciation of a particular needs a sensory memory. In relation to education, an educational connoisseur must have appropriate experiences with classroom practice to be able to distinguish what is significant about one set of practices or another. Therefore, in order to develop educational connoisseurship, one must have a desire not only to perceive subtleties of the particulars and to focus on one's perception, but also to recognize the structure and rules of those particulars within the classroom.

According to Eisner (1985), everyone can develop educational connoisseurship to some degree if he/she has spent some time in the classroom as a instructor, a student, or an observer. Educational connoisseurship is selective and is not value-free. Moreover, there are two major points in the

development of educational connoisseurship. First, one must have the opportunities to perceive the particulars of educational life in a focused, sensitive, and conscious way. Second, one must have the opportunities to compare, discuss, integrate, and appraise those particulars. In all, according to Eisner, connoisseurship provides a strong foundation for educational criticism. Educational connoisseurship is a key to educational criticism, otherwise, educational criticism is likely to be empty. Educational criticism is the art of disclosure. All the above perspectives are applicable to the area of distance education in this study.

In addition, there is a second framework for this study. That is, distance education and traditional formats have both similarities and differences. According to Morgan (1991b), the social and domestic contexts in distance education and traditional formats are different, but the basic issues of approach to study and the influence on learning outcomes are very similar in these two formats. Based on this framework, the instructional processes of simultaneously teaching the same course in distance education and traditional formats will have similarities and differences.

Research Methodology

Participants

One instructor participant who, in the same term, taught the same course in both distance education and traditional classrooms in a middle-size regional university, was selected. This male educational administration instructor has

teaching and administrative experiences in public schools. The course observed in this study was public school law at the graduate level. The instructor has several years of university teaching experience in distance education.

Site Description

Distance education classroom description. The distance education classroom is a large classroom that is located at the university's main campus. The course was broadcast to two other remote locations. The characteristics of the sending site are described as follows:

There are two rows of TVs in the ceiling. Each row has four TVs. One row is for the instructor to view and control all sites. The other row is for the students in the sending site to view students in the remote sites. For the instructor, there is one distance educational control system, one PC with two speakers, one microphone, one document projector, one VCR, one telephone on the front desk, one fax machine on the other front desk, as well as one high chair in front of the front desk. For the students, there are several rows of desks and chairs, as well as several microphones installed in the ceiling for students to communicate with other students at the remote sites. There are 14 students in the sending site, 7 in one remote site, and 2 in the other remote site.

Traditional classroom site description. The traditional classroom is a large classroom that is located at an off-campus site. In the classroom, there is a variety of teaching equipment that includes one TV, one VCR, one PC, two speakers, one projector, and one blackboard. There are also many tables for

students. Every two tables are placed together so that several students can sit around the two tables and discuss with one another. There are 29 students in the traditional classroom. Procedure

First, a variety of technologies were used to collect qualitative field data in observations and interviews. These technologies included one camera, one tape audio recorder, one tape, one film, one notebook, one file folder, paper, pencils, and inked or colored pens. Second, several qualitative methods were involved in this study, including non-participant observations, interviews, surveys, and validation.

Non-participant observations. Securing the agreement to participate, the instructor granted access to both his traditional and distance classrooms. His distance class was scheduled each Monday evening and his traditional class was scheduled each Tuesday evening, both for a 16 week term. Classes were randomly observed eight times in spring 1999: five times for the distance classroom and three for the traditional classroom. In all, 24 hours of random field observations were conducted. Detailed field notes and research journals were written for each observation. Then, all observation notes and research journals were edited and typed.

Interviews. A 60-minute interview was conducted with the participant in his office on March 3, 1999. This interview was tape-recorded. A pre-interview questionnaire was prepared that included 12 questions regarding the participant's beliefs and experiences about distance education technology. In

addition, the participant completed a simple survey that included 12 multiple-choice questions. After the interview, the interview tape was transcribed and edited.

Validation. In order to validate the collected materials, member checks were conducted with the participant. This procedure can eliminate the researcher's biases and false consciousness about this study. According to Ely, Vinz, Downing, and Anzul (1997), participants can see experiences in ways researchers cannot. Listening to the participants' voices allows researchers and others to see past the edges of the researchers' vision. Therefore, through this dialectic exchange the research findings will be further shaped. According to Coldeway (1988), member checks were regarded as one of the five basic research strategies in distance education research.

Limitations. There are two limitations in this study. First, this study is a case study. All research findings are related to the particular instructor in that university. Second, this study only involved 24 hours of random field observations. Therefore, care has to be taken when the findings in this study are generalized to other contexts.

Findings and Discussion

According to Jackson (1968), teaching includes both interactive teaching and preactive teaching. Interactive teaching refers to the in-class phase while preactive teaching refers to either prior to (before-classes) or after (after-classes) the interactive teaching phase. The major findings of this study highlight the

effects of educational technology on the same instructor at the above three instructional phases in both distance education and traditional formats. Specifically, the findings in this study highlight (1) how educational technology affects the instructor's instruction at three phases: (a) before-classes, (b) in-classes, and (c) after-classes and (2) both the similarities and differences among the above three phases in both distance education and traditional formats. These two major highlights and the three instructional phases are integratively presented and discussed as follows:

Phase 1: Before-classes

A major similarity in Phase 1 was that the instructor prepared similar materials for both distance education and traditional classrooms. These materials include the textbooks, the quizzes, the case study materials, PowerPoint presentations, and other supplemental materials including materials designed to be on the Internet. This finding is similar to previous results. According to Wolcott (1991, 1993), one of the instructor's planning characteristics for distance courses is content-oriented rather than process-oriented.

However, there was a major difference in this phase as well. The instructor reported that it was more time-consuming in terms of course preparations in the distance education classroom than in the traditional classroom. These distance preparations include sending and faxing materials to the remote sites, designing the distance course, and putting supplemental

materials on the Internet for students to access. Just as the participant remarked during the interview, the preparation of distance courses is

> ...much more time-consuming. It takes a lot more time to manage a distance education class with multiple sites, because one of the things I want to accomplish is not to lessen the contact or cover less or require students to do something that might be different or perceived as less rigorous than what I would have in regular classes. So what you noticed in observing me is that I gave quizzes every week for reading materials. What you may notice is that the quiz I mailed on Thursday had not arrived on Monday. Of course, you know, sorting these things out, and having them mailed takes more time than just for making copies and bringing them to classes. In order to cover that, I now must fax the quizzes to each of the sites because the mail has not got them there.

Therefore, although technology can facilitate instruction for distance classes, it took much time for the instructor to make high quality preparations for the distance courses. This supports previous findings. According to Burnham (1988), higher quality preparations and more time will be needed to provide effective education to the distance students.

Phase 2: In-classes

The major similarities in Phase 2 are twofold. First, the instructor used a similar inquiry-based instructional method in both distance education and traditional formats. The basic of this inquiry-based instructional method was that

the instructor initiated questions for students to discuss with each other. This method involved reviewing the contents of the quizzes and the previous materials, presenting and teaching the new knowledge, as well as summarizing the whole class. This inquiry-based instructional method is similar to discussion-based teaching—one of the four important views of teaching and learning in distance education (MacKinnon, Walshe, Cummings, & Velonis, 1995). Second, the instructor followed a similar instructional procedure in both distance education and traditional classrooms. This complete instructional procedure includes administering quizzes, reviewing quiz items, talking about students' out-of-class assignments, teaching and presenting new knowledge, and summarizing the whole class. These two findings are not in congruent with the previous ones. According to some researchers (e. g., Gehlauf, Shatz, & Frye, 1991; Mottet, 1998), the distance instructor is conventionally called as the "talking head". That is, in distance classes, the instructor talks all the time; there is little participation and discussion from the students.

The above two similarities may be related to the participant's available time. In fact, the participant has already noticed these issues. Just as the participant remarked during the interview:

> My teaching style probably has not been modified enough ... I probably try to teach my classes alike, with each class the same way, that is probably not good. But at this time I am not interested in modifying. Quite frankly, I don't have enough time to put into that ....

The major differences in this phase are shown in the following six aspects: First, the instructor employed more educational technology in distance education classroom than in the traditional classroom. In all observations in the distance classroom, the instructor used a variety of educational technologies to assist instruction. For example, the instructor used the fax machine to send quizzes and other instructional materials to the students in remote sites, used the document projector and the Internet to display and teach previous and new knowledge, used the telephone to call the coordinator in remote sites for assistance, and used the computer and the Internet technology to do PowerPoint presentations. However, in the traditional classroom, the instructor only used the computer, the Internet technology, the projector, and the blackboard for instruction.

Second, the instructor had to be more patient in the distance education classroom than in the traditional classroom because of more unpredictable technology problems. The experiences resulting from technological problems were difficult for both the instructor and the students. Sometimes, faxing a quiz to a remote site took nearly 30 minutes, or even longer. However, according to the participant, this kind of patience sometimes has advantages, e. g., it can allow students opportunities to respond to the instructor's questions. However, in the traditional classroom, the instructor did not have to be so patient since the instructor did not have to use educational technology much, and technological problems were not an issue.

Third, the in-class management was much more time-consuming in distance education classroom than in the traditional classroom. It was also harder to see the students' response on their faces, especially on TV screens from remote sites. This may be related to the instructor's familiarity with the educational technology. However, in the traditional classroom, the instructor could easily control the in-class management.

Fourth, the instructor had to speak louder in the distance classroom than in the traditional classroom since he was afraid that students in remote sites might not hear him clearly. Just as the participant remarked during the interview,

> ...I found myself too shouting, talking much louder in distance classes. I am afraid they cannot hear me. And so I found myself too shouting in all of my distance classes....

However, in the traditional classroom, the instructor did not have to shout since all students could hear him easily and clearly.

Fifth, it was harder for the instructor to monitor all students from multiple local and remote sites than in the traditional classroom. In most situations in the distance education courses, there was more participation and discussion from students in the sending site and less participation in the remote sites. Sometimes, students or students' questions and discussions were ignored in remote sites. On one hand, this is related to the restricted bandwidth of the distance education technology; on the other hand, it may be related to other factors, such as class sizes, the instructor's attention characteristics, and the

instructor's training and experiences in distance education. However, in the traditional classroom, the instructor could easily monitor all students.

Sixth, the instructor's teaching style was more restricted in distance education classroom than in the traditional classroom. Although occasionally the instructor could walk away for a short while from the instructor's desk, in most cases, he could not walk around in the sending site; otherwise, the students from other remote sites could not see him on the TV screen and would lose physical contact with him. Therefore, the instructor had to stand or sit on the chair in front of the instructor's desk for the whole class. However, in the traditional classroom, the instructor could stand, sit, and walk around freely in the classroom.

Phase 3: After-classes

There is one major similarity in this phase. Specifically, the instructor initially asked the students in both distance education and traditional classrooms to submit their assignments and papers via e-mail after class. According to Davie (1988), e-mail communication is one of the important strategies to facilitate adult learning in distance education. However, this took the instructor a lot of extra time to read the assignments and give feedback to each student via e-mail. However, since the instructor had not enough time to read large volumes of e-mail messages and give separate feedback, he had to treat students in distance education and traditional classrooms differently from the middle of that semester. That is, the distance students could continue submitting their assignments and papers via e-mail, while the students in the traditional classroom were told to

stop submitting their assignments and papers via e-mail and to turn in their hard copies. Again, this suggests that preparations for distance courses are more time-consuming after classes.

In sum, it can be concluded that the instructor used traditional approaches (e. g., lecture and inquiry-based discussion) and technology-based methods (PowerPoint presentations, e-mails, and access to the Internet) in both his distance and traditional education classrooms. However, the instructor employed more technology-based methods for his distance education classrooms and more traditional approaches for his traditional classrooms. This is not in complete congruence with previous findings. According to Gehlauf, Shatz, and Frye (1991), most instructors tend to use traditional approaches in their distance classrooms although they think that these methods are not effective in distance environments. This incongruence may be related to the rapid development of educational technology in recent years. Therefore, many instructors are more technology literate and are using more technology-based methods for their distance courses.

Summary and Recommendations

This exploratory study has suggested that the instructor who teaches the same course in both distance education and traditional classrooms exhibits both similarities and differences in three instructional phases in both situations. The similarities in both situations include (1) preparing similar instructional materials before classes, (2) using a inquiry-based instructional method and a similar

teaching procedure in classes, and (3) asking students to submit assignments via e-mail after classes at the beginning of the semester. However, there are more differences. These differences include (1) more time-consuming course preparations before classes, (2) more use of educational technology, the instructor had to be more patient, in-class management was more time-consuming, the instructor had to speak louder, it was harder to manage multiple sites, and the teaching style was more restricted, in classes, and (3) the instructor had to do more computer-mediated communication after classes, in distance education classroom than in the traditional classroom.

In the area of distance education, too much attention has been paid to the hardware of the systems. However, according to Wilkes and Burnham (1991) and Olcott (1996), the instructor is still the important element in many distance education systems. According to Eisner's (1985) theory of connoisseurship/criticism mentioned previously, classroom observations will be very helpful to develop educational connoisseurship, which will eventually provide a key to the educational criticism. Therefore, based on these perspectives, all observations in both distance education and traditional formats, and the interview with the participant, many important recommendations for the university and the instructors of distance education result from this study.

First, the university should provide and maintain reliable and high-quality distance education technology. According to the participant, occasional unpredictable technology problems will bring about negative experiences for both

the instructor and the students, which will eventually reduce their motivations of teaching and learning in distance education.

Second, the university should support the instructor's effort in distance education. The university should acknowledge that teaching distance education courses is much more time-consuming than teaching traditional ones. According to the participant, the university should either give the instructor some kind of extra stipend for reward, or allow them to teach fewer courses each semester. Olcott (1996) also proposed this as one of the strategies for managing successful distance education programs for the 21st century. However, according to Wolcott (1997), most universities do not accommodate to and reward faculty work in distance education. Specifically, distance education is now neither highly valued nor well-rewarded, nor highly related to promotion and tenure in most universities.

Third, the university should provide systematic field training to instructors of distance education. This kind of training includes (1) the familiarity with the educational/computer technology, (2) distance education class management skills before, in, and after classes, and (3) psychological training such as attention management and patience control. All these field training will facilitate successful distance instruction. Most previous studies only dealt with the first issue (e. g., Carl, 1986; Gehlauf, Shatz, & Frye, 1991). A few studies mentioned the second issue such as the improvement of the listening skills in the distance class (e. g., Mottet, 1998). However, very few studies have dealt with the third

issue—the psychological training. We think that this type of training is necessary and is as important as the first two issues for successful distance instruction.

Fourth, in addition to the instructional evaluation of distance education (e. g., Wagner, 1993), the university should conduct cost-effective analyses. The major goal of distance education is to increase student enrollment. But this study has found that one remote site has only two students. Is this site worth the institution's effort? Therefore, according to the participant, urgent cost-effective analyses about distance education should be initiated. According to Phelps, Wells, Ashworth, Jr., and Hahn (1991), the effectiveness and cost of distance education may vary due to class sizes, student drop-outs, and the type of implementation model.

Fifth, the instructor should learn more of and take into account the distance students' characteristics. Although approaches to the study of the characteristics of distance students are basically similar to those of students studying in the traditional formats (e. g., Harper & Kember, 1986), distance students have different characteristics from traditional ones. According to Biner, Bink, Huffman, and Dean (1995), distance students tend to be more emotional stable, trusting, intelligent, compulsive, passive, and conforming than traditional ones. Therefore, the instructor should emphasize the distance students' unique characteristics in preparation for distance courses.

Sixth, the instructor should make more preparations for distance courses than for traditional instruction since there are unpredictable technological

problems in distance education settings. According to Wolcott (1991, 1993), instructor's preparations for distance instruction have three major characteristics: course- or term-oriented, content-oriented, and syllabus-oriented planning. In addition, these preparations should be highly structured to compensate for the two special characteristics of distance education: limited time and geographic separation (Burnham, 1988). In all, the instructor's high investment in the instructional design of distance education is worth the effort (Valcke, Martens, Poelmans, & Daal, 1993).

Seventh, the instructor should go to each remote site on a rolling basis. As discussed previously, there were more participation and discussion from the students in the sending site and less in the remote sites. If the instructor can go to remote sites on a rolling basis, the above phenomenon will be changed. That is, there will be more positive interaction and communication between the instructor and the students at a distance.

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